JOURNAL OF CHROMATOGRAPHY A

VOL. 778, NOS. 1 + 2 22 AUGUST 1997

CONTENTS

(Abstracts/Contents Lists published in Analytical Abstracts, Biochemical Abstracts, Biological Abstracts, Chemical Abstracts, Chemical Titles, Chromatography Abstracts, Current Awareness in Biological Sciences (CABS), Current Contents/Life Sciences, Current Contents/Physical, Chemical & Earth Sciences, Deep-Sea Research/Part B: Oceanographic Literature Review, Excerpta Medica, Index Medicus, Mass Spectrometry Bulletin, PASCAL-CNRS, Referativnyi Zhurnal, Research Alert and Science Citation Index)

25TH SCIENTIFIC MEETING OF THE GROUP OF CHROMATOGRAPHY AND RELATED TECHNIQUES OF THE SPANISH ROYAL SOCIETY OF CHEMISTRY, BARCELONA, SPAIN, 22–25 OCTOBER 1996

Foreword
by E. Gelpí, J.O. Grimalt (Barcelona, Spain) 1

REVIEW

Some reflections on speed and efficiency of modern chromatographic methods
by H. Poppe (Amsterdam, Netherlands) 3

GENERAL TECHNIQUES

Retention time repeatability as a function of the injection automatism in the analysis of trace organochlorinated compounds with high-resolution gas chromatography
by L. Berdié, M. Santiago-Silva, R. Vilanova and J.O. Grimalt (Barcelona, Spain) 23

High speed solvating gas chromatography using packed capillaries containing sub-5 μm particles
by Y. Shen and M.L. Lee (Provo, UT, USA) 31

Multiple peaks in high-performance liquid chromatography of proteins. β-Lactoglobulins eluted in a hydrophobic interaction chromatography system
by M. de Frutos, A. Cifuentes and J.C. Díez-Masa (Madrid, Spain) 43

Macromolecules in ordered media VIII. High-performance size-exclusion chromatography as a technique for characterizing the interaction between polyanions and cationic liposomes
by I. Porcar (València Spain and Paris, France), Í. Catalá, R. García, C. Abad and A. Campos (València, Spain) 53

Reliability of the capacity factor at zero micellar concentration and the solute–micelle association constant estimates by micellar liquid chromatography
by F. Argilés, S. Sagrado and M.J. Medina-Hernández (València, Spain) 67

CHLORINATED HYDROCARBONS

Micellar electrokinetic capillary chromatographic separation of polychlorinated biphenyl congeners
by I. Benito, J.M. Saz, M.L. Marina, J. Jiménez-Barbero, M.J. González and J.C. Diez-Masa (Madrid, Spain) 77

Hexachlorocyclohexanes in human blood serum
by R. Otero, M. Santiago-Silva and J.O. Grimalt (Barcelona, Spain) 87

(Continued overleaf)

FUNGICIDES, HERBICIDES, PESTICIDES

Simplified reversed-phase conditions for the determination of benzimidazole fungicides in fruits by high-performance liquid chromatography with UV detection (Short communication)
by N. Tharsis, J.L. Portillo, F. Broto-Puig and L. Comellas (Barcelona, Spain) 95

Development of a new high-performance liquid chromatography method to analyse N-methylcarbamate insecticides by a simple post-column derivatization system and fluorescence detection
by A. Sabala, J.L. Portillo, F. Broto-Puig and L. Comellas (Barcelona, Spain) 103

Matrix effects in the determination of acaricides and fungicides in must by gas chromatography with electron-capture and nitrogen–phosphorus detection
by J.L. Bernal, M^a.J. del Nozal, J.J. Jiménez and J.M^a. Rivera (Valladolid, Spain) 111

Determination of chlorsulfuron and tribenuron-methyl residues in agricultural soils
by J.L. Bernal, J.J. Jiménez, A. Herguedas and J. Atienza (Valladolid, Spain) 119

Comparison of octadecylsilica and graphitized carbon black as materials for solid-phase extraction of fungicide and insecticide residues from fruit and vegetables
by C.M. Torres, Y. Picó and J. Mañes (València, Spain) 127

Evaluation of multiwavelength chromatograms for the quantification of mixtures of pesticides by high-performance liquid chromatography–diode array detection with multivariate calibration
by M. Martínez Galera, J.L. Martínez Vidal, A. Garrido Frenich and M.D. Gil García (Almería, Spain) 139

Automated sample clean-up and fractionation of chlorpyrifos, chlorpyrifos-methyl and metabolites in mussels using normal-phase liquid chromatography
by R. Serrano, F.J. López, A. Roig-Navarro and F. Hernández (Castellón, Spain) 151

Stability of pesticides stored on polymeric solid-phase extraction cartridges
by I. Ferrer and D. Barceló (Barcelona, Spain) 161

New method for the rapid determination of triazine herbicides and some of their main metabolites in water by using coupled-column liquid chromatography and large volume injection
by F. Hernández, C. Hidalgo, J.V. Sancho and F.J. López (Castellón, Spain) 171

Resolution of folpet, procymidone and triazophos in high-performance liquid chromatography–diode array detection by using partial least squares calibration to cross-sections of spectrochromatograms
by A. Garrido Frenich, J.L. Martínez Vidal, P. Parrilla and M. Martínez Galera (Almería, Spain) 183

Determination of thiazopyr residues in soil and plants by gas chromatography with nitrogen–phosphorus detection and confirmation by gas chromatography–mass spectrometry
by R.A. Pérez, C. Sánchez-Brunete and J.L. Tadeo (Madrid, Spain) 193

Use of different surfactants (sodium dodecyl sulfate, bile salts and ionic polymers) in micellar electrokinetic capillary chromatography. Application to the separation of organophosphorus pesticides
by M. Aguilar, A. Farran and C. Serra (Barcelona, Spain) and M.J. Sepaniak and K.W. Whitaker (Knoxville, TN, USA) 201

FOOD ANALYSIS

Liquid chromatography–atmospheric-pressure chemical ionization mass spectrometry as a routine method for the analysis of mutagenic amines in beef extracts
by P. Pais, E. Moyano, L. Puignou and M.T. Galceran (Barcelona, Spain) 207

Fractionation of glycoside precursors of aroma in grapes and wine
by J.J. Mateo (València, Spain), N. Gentilini (Asti, Italy), T. Huerta and M. Jiménez (València, Spain) and R. Di Stefano (Asti, Italy) 219

Determination of volatile compounds in Txakoli wine from Biscay by gas chromatography–mass spectrometry
by A. Escobal, C. Iriondo and C. Laborra (Bilbao, Spain) 225

Determination of available lysine in infant milk formulae by high-performance liquid chromatography (Short communication)
by S. Albalá-Hurtado, S. Bover-Cid, M. Izquierdo-Pulido, M.T. Veciana-Nogués and M.C. Vidal-Carou (Barcelona, Spain) . . 235

Determination of vitamins A and E in infant milk formulae by high-performance liquid chromatography (Short communication)
by S. Albalá-Hurtado, S. Novella-Rodríguez, M.T. Veciana-Nogués and A. Mariné-Font (Barcelona, Spain) 243

Determination of water-soluble vitamins in infant milk by high-performance liquid chromatography (Short communication)
by S. Albalá-Hurtado, M.T. Veciana-Nogués, M. Izquierdo-Pulido and A. Mariné-Font (Barcelona, Spain) 247

AIR ANALYSIS

Evaluation of styrene in air by thermal desorption–gas chromatography
by C. Prado, I. Ibarra and J.F. Periago (Murcia, Spain) 255

Evaluation of environmental levels of aromatic hydrocarbons in gasoline service stations by gas chromatography
by J.F. Periago, A. Zambudio and C. Prado (Murcia, Spain), Spain) 263

Refrigerated multibed adsorption in sampling and analysis of atmospheric light hydrocarbons at ppb (v/v) and sub-ppb (v/v) concentrations
by A. Castellnou (Barcelona, Spain), N. Gonzalez-Flesca (Verneuil-en-Halatte, France) and J.O. Grimalt (Barcelona, Spain) . . 269

WATER ANALYSIS

Determination of phenolic pollutants in drinking water by capillary electrophoresis in the sample stacking mode
by I. Rodríguez, M.I. Turnes, M.H. Bollaín, M.C. Mejuto and R. Cela (Santiago de Compostela, Spain) 279

Determination of pesticide residues in waters from small loughs by solid-phase extraction and combined use of gas chromatography with electron-capture and nitrogen–phosphorus detection and high-performance liquid chromatography with diode array detection
by J.J. Jiménez, J.L. Bernal, M^a.J. del Nozal and J.M^a. Rivera (Valladolid, Spain) 289

Determination of priority phenolic compounds in water and industrial effluents by polymeric liquid–solid extraction cartridges using automated sample preparation with extraction columns and liquid chromatography. Use of liquid–solid extraction cartridges for stabilization of phenols
by M. Castillo, D. Puig and D. Barceló (Barcelona, Spain) 301

Determination of polar priority phenols at parts per trillion levels in water using on-line liquid–solid extraction followed by liquid chromatography with coulimetric detection
by D. Puig and D. Barceló (Barcelona, Spain) 313

Determination of polycyclic aromatic hydrocarbons in waters by use of supercritical fluid chromatography coupled on-line to solid-phase extraction with disks
by J.L. Bernal, M^a.J. Nozal, L. Toribio and M^a.L. Serna (Valladolid, Spain) and F. Borrull, R.M. Marcé and E. Pocurull (Tarragona, Spain) 321

Quantitation of volatile sulphur compounds in polluted waters (Short communication)
by I. Sola, X. Ausio, R. Simo, J.O. Grimalt and A. Ginebreda (Barcelona, Spain) 329

Application of solid-phase extraction discs with a glass fiber matrix to fast determination of polycyclic aromatic hydrocarbons in water
by I. Urbe and J. Ruana (Tarragona, Spain) 337

OTHER APPLICATIONS

Determination of glutathione, cysteine and N-acetylcysteine in rabbit eye tissues using high-performance liquid chromatography and post-column derivatization with 5,5′-dithiobis(2-nitrobenzoic acid)
by M^a.J. Nozal, J.L. Bernal, L. Toribio, P. Marinero, O. Moral, L. Manzanas and E. Rodriguez (Valladolid, Spain) 347

Direct determination of prolintane and its metabolite oxoprolintane in human urine by capillary zone electrophoresis and β-cyclodextrin-modified micellar electrokinetic chromatography
by A.G. Espartero, J.A. Pérez, A. Zapardiel, E. Bermejo and L. Hernández (Madrid, Spain) 355

Determination of mycotoxins produced by *Fusarium* isolates from banana fruits by capillary gas chromatography and high-performance liquid chromatography
by M. Jiménez and R. Mateo (València, Spain) 363

Study of binding media in works of art by gas chromatographic analysis of amino acids and fatty acids derivatized with ethyl chloroformate
by R. Mateo Castro, M.T. Doménech Carbó, V. Peris Martínez, J.V. Gimeno Adelantado and F. Bosch Reig (València, Spain) . 373

Preparative isolation of nine indispensable amino acids from a single sample (Short communication)
by D. Torrallardona and C.I. Harris (Aberdeen, UK) 383

Separation and quantitation of debrisoquine and 4-hydroxydebrisoquine in human urine by capillary electrophoresis and high-performance liquid chromatography
by A. Cifuentes, J. Valencia, E. Sanz, M.J. Sánchez and M.A. Rodríguez-Delgado (La Laguna, Spain) 389

Capillary electrophoretic determination of cyanide leaching solutions from automobile catalytic converters (Short communication)
by M. Aguilar, A. Farran and V. Martí (Barcelona, Spain) 397

Characterization of coal-derived pitches as precursors for advanced carbon materials by chromatographic and related techniques
by J. Machnikowski and H. Machnikowska (Wroclaw, Poland) and M.A. Díez, R. Alvarez and J. Bermejo (Oviedo, Spain) . . 403

Simultaneous determination of vitamins A and E in rat tissues by high-performance liquid chromatography (Short communication)
by C. Barbas, M. Castro, B. Bonet, M. Viana and E. Herrera (Madrid, Spain) 415

Analysis of diterpenoids from *Sideritis* species by reversed-phase high-performance liquid chromatography (Short communication)
by P. Gómez-Serranillos, O.M. Palomino, A.I. Villarrubia, M.A. Cases, E. Carretero and A. Villar (Madrid, Spain) 421

Analysis of volatile components of oak wood by solvent extraction and direct thermal desorption–gas chromatography–mass spectrometry
by M.S. Pérez-Coello (Ciudad Real, Spain), J. Sanz (Madrid, Spain) and M.D. Cabezudo (Ciudad Real, Spain) 427

Comparison of two methods for the determination of fatty acid profiles in plasma and erythrocytes (Short communication)
by M. Rodríguez-Palmero, M.C. Lopez-Sabater, A.I. Castellote-Bargallo, M.C. De La Torre-Boronat and M. Rivero-Urgell (Barcelona, Spain) 435

Chromatographic purification of biliproteins from *Spirulina platensis*. High-performance liquid chromatographic separation of their α and β subunits
by R. Bermejo, E.M. Talavera, J.M. Alvarez-Pez and J.C. Orte (Granada, Spain) 441

AUTHOR INDEX VOL. 778 451

The table of contents of *Journal of Chromatography* is included in ESTOC – Elsevier Science Tables of Contents service – which can be accessed on the World Wide Web at the following URL addresses:
http://www.elsevier.nl/locate/estoc or http://www.elsevier.com/locate/estoc